

4-10-22

# Biochemistry

## Enzyme

— Biocatalyst (made up of protein).

↳ Substance which speed up the chemical reaction but unchange itself.

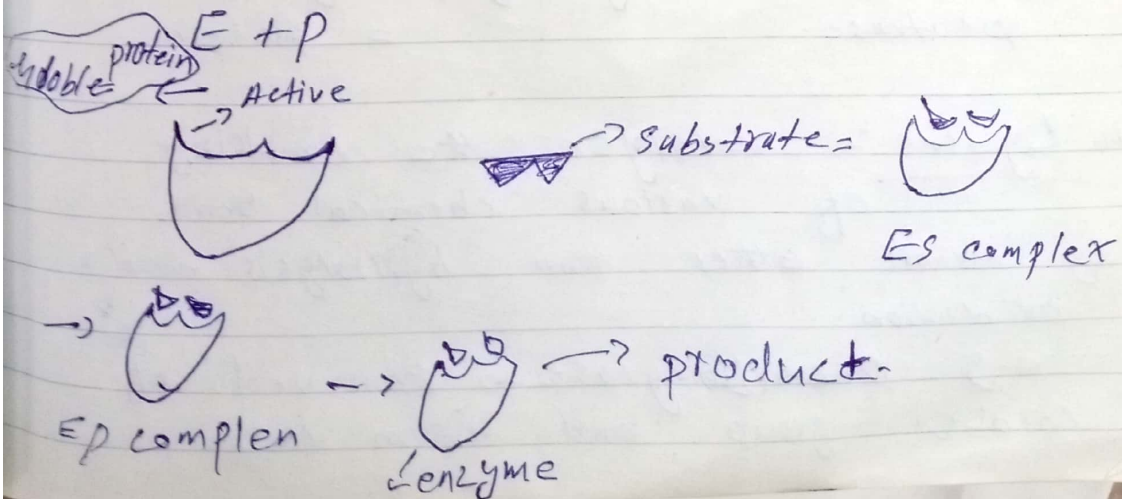
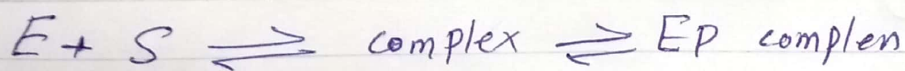
— The total sum of all chemical reaction going on in the body is called metabolism.

— catabolism = involve the breakdown of molecule and usually energy is released.

e.g. oxidation and hydrolysis

Anabolic — synthesis of large molecules and energy required  
condensation.

— The chemical on which enzymes work called substrate.



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Classification  $\rightarrow$  Divided into six classes.

Oxidoreductase :- Enzyme that catalyses the transfer of electron from one molecule the reductant (electron donor) to another molecules the oxidants (electron acceptor)

— Simple catalysis oxidation  $\rightarrow$  reduction reaction.

e.g. oxidases, dehydrogenase  
 $\hookrightarrow$  transfer of  $H^+$

② Transferase  $\Rightarrow$  Help in transfer of specific functional group from one molecules to another  
e.g. Kinase, Transaminase.

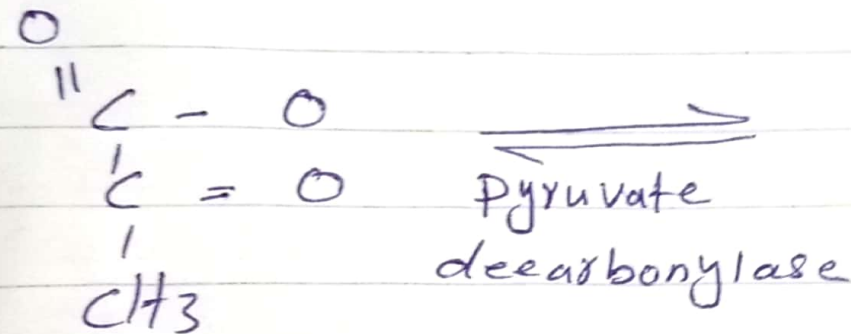
③ Hydrolases  $\rightarrow$  Those enzyme involve in hydrolysis of compound using water.

e.g. Amylase - hydrolysis of CHO  
protease. = protein

4. Lyases :- catalyse the breaking of various chemical bond by means other than hydrolysis and oxidation.

e.g. Decarboxylase  $\rightarrow$  Removed of carboxyl group and from  $CO_2$

Hydrolases means break down of food.



Pyruvate

